Supplemental material

Table S1: Results of a random-effects model of HOMA-B

Intervention	Coef.	SD	z	P>|z|	[95% CI]
EXBID	-0.46	0.91	-5.07	0.001	-0.64, -0.28
Glibenclamide 2.5mg	-0.51	0.32	-1.55	0.121	-1.14, 0.13

insulin	-0.27	0.09	-2.81	0.005	-0.45, -0.08
MET	-0.39	0.12	-3.38	0.001	-0.62, -0.16
PIO	-0.48	0.10	-4.85	0.001	-0.68, -0.29
SITA	-0.49	0.12	-4.01	0.001	-0.73, -0.25
placebo	-0.45	0.31	-1.45	0.147	-1.06, 0.16
Semaglutide QW	0.11	0.11	1.03	0.303	-0.10, 0.32

434

435 **Table S2: Results of a random-effects model of FBG**

Intervention	Coef.	SD	z	P>|z|	[95% CI]
EXBID	0.20	0.46	0.44	0.658	-0.70, 1.10
Glibenclamide 2.5mg	-0.07	0.75	-0.09	0.925	-1.54, 1.40
insulin	-0.02	0.49	-0.04	0.968	-0.97, 0.93
MET	0.34	0.61	0.56	0.574	-0.85, 1.54
PIO	-0.21	0.50	-0.42	0.675	-1.19, 0.77
SITA	1.23	0.63	1.96	0.050	0.002, 2.48
placebo	0.71	0.79	0.91	0.365	-0.83, 2.26
Semaglutide QW	-0.80	0.66	-1.22	0.222	-2.08, 0.48

436

437 **Table S3: Results of a random-effects model of HbA1c**

Intervention	Coef.	SD	z	P>|z|	[95% CI]
EXBID	0.12	0.18	0.66	0.511	-0.25, 0.48
Glibenclamide 2.5mg	-0.08	0.32	-0.24	0.808	-0.71, 0.55
insulin	0.14	0.18	0.74	0.457	-0.22, 0.49
MET	0.18	0.24	0.74	0.460	-0.29, 0.65
PIO	0.16	0.19	0.83	0.407	-0.22, 0.54
SITA	0.51	0.24	2.09	0.037	0.03, 0.99
placebo	0.52	0.31	1.66	0.097	-0.09, 1.13
Semaglutide QW	-0.60	0.25	-2.40	0.016	-1.09, -0.11

438

439 **Table S4: Results of a random-effects model of weight loss**

Intervention	Coef.	SD	z	P>|z|	[95% CI]
EXBID	-0.73	0.20	-3.56	0.001	-1.13, -0.33
Glibenclamide 2.5mg	4.47	1.58	2.84	0.005	1.38, 7.57
insulin	3.99	0.24	16.95	0.001	3.53, 4.45
MET	-0.07	0.28	-0.25	0.799	-0.61, 0.47
PIO	3.27	0.29	11.25	0.001	2.70, 3.84
SITA	1.13	0.35	3.19	0.001	0.44, 1.82
placebo	1.27	1.46	0.87	0.382	-1.58, 4.13

Semaglutide QW	-3.70	0.41	-9.02	0.001	-4.50, -2.90

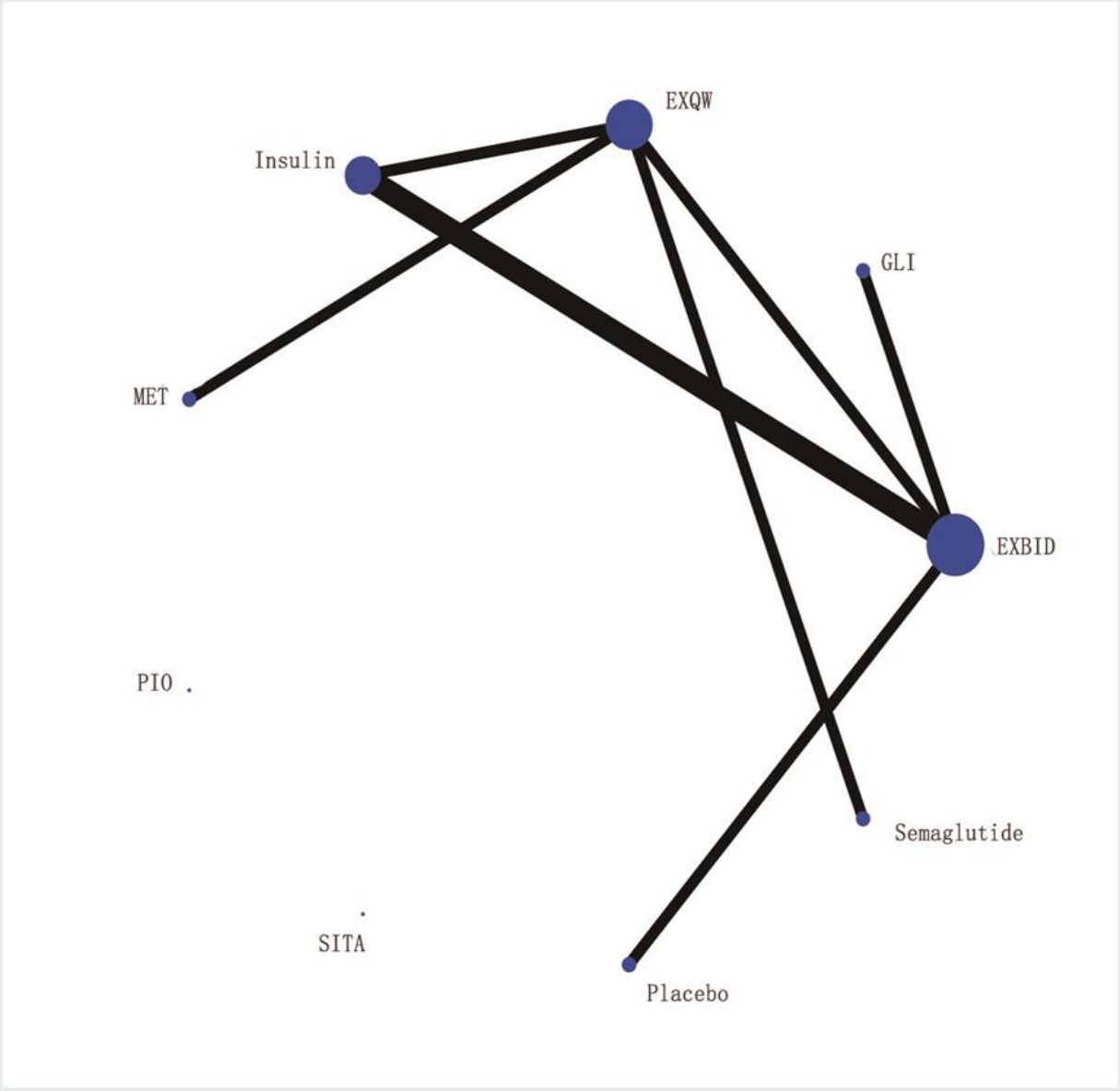
440

441

442

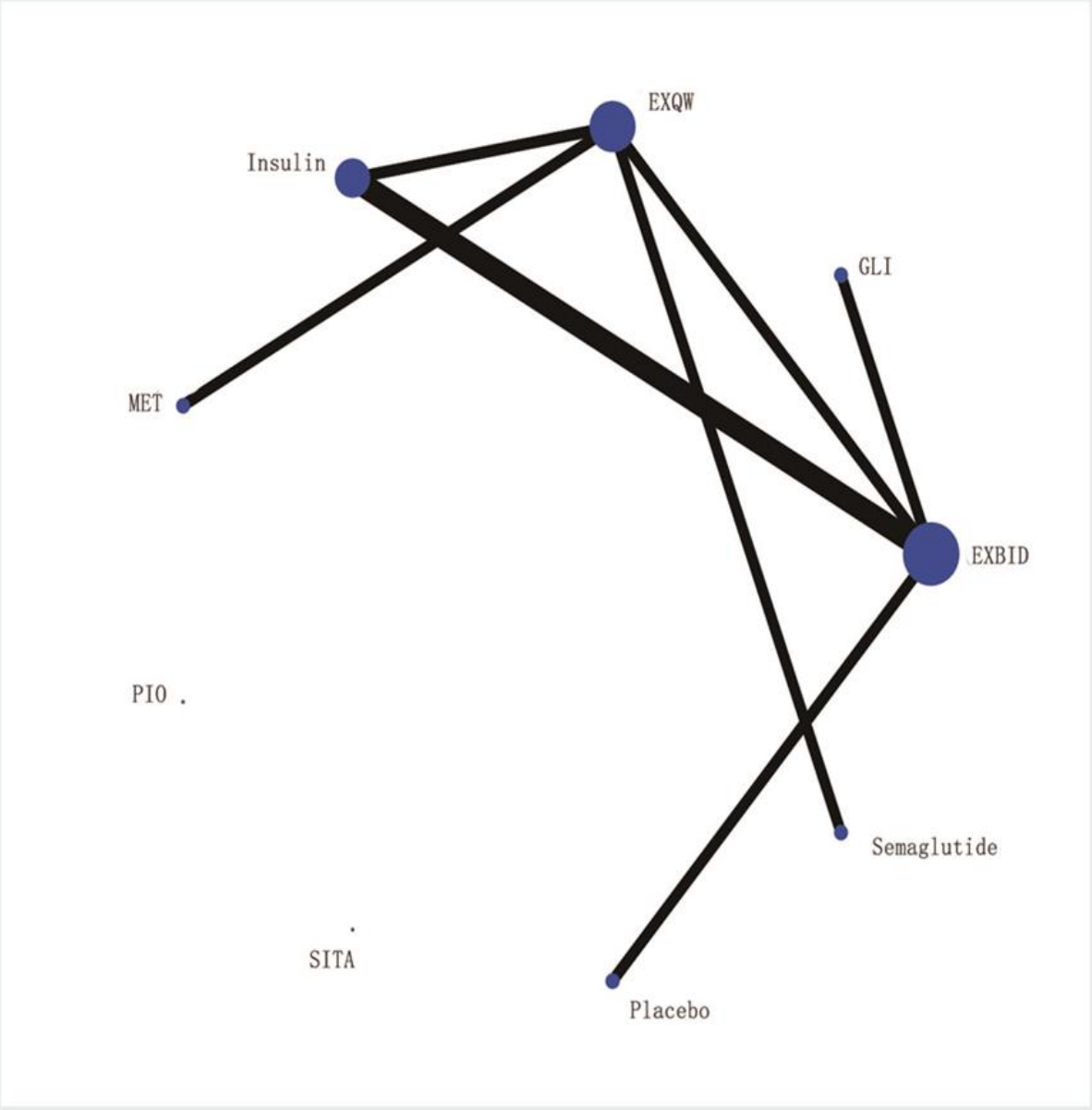
443 **Figure S1: Evidence structure of eligible comparisons for network meta-**

444 **analysis of the secondary outcomes (FBG, HbA1c, Weight loss)**



445 **A: FBG**

446

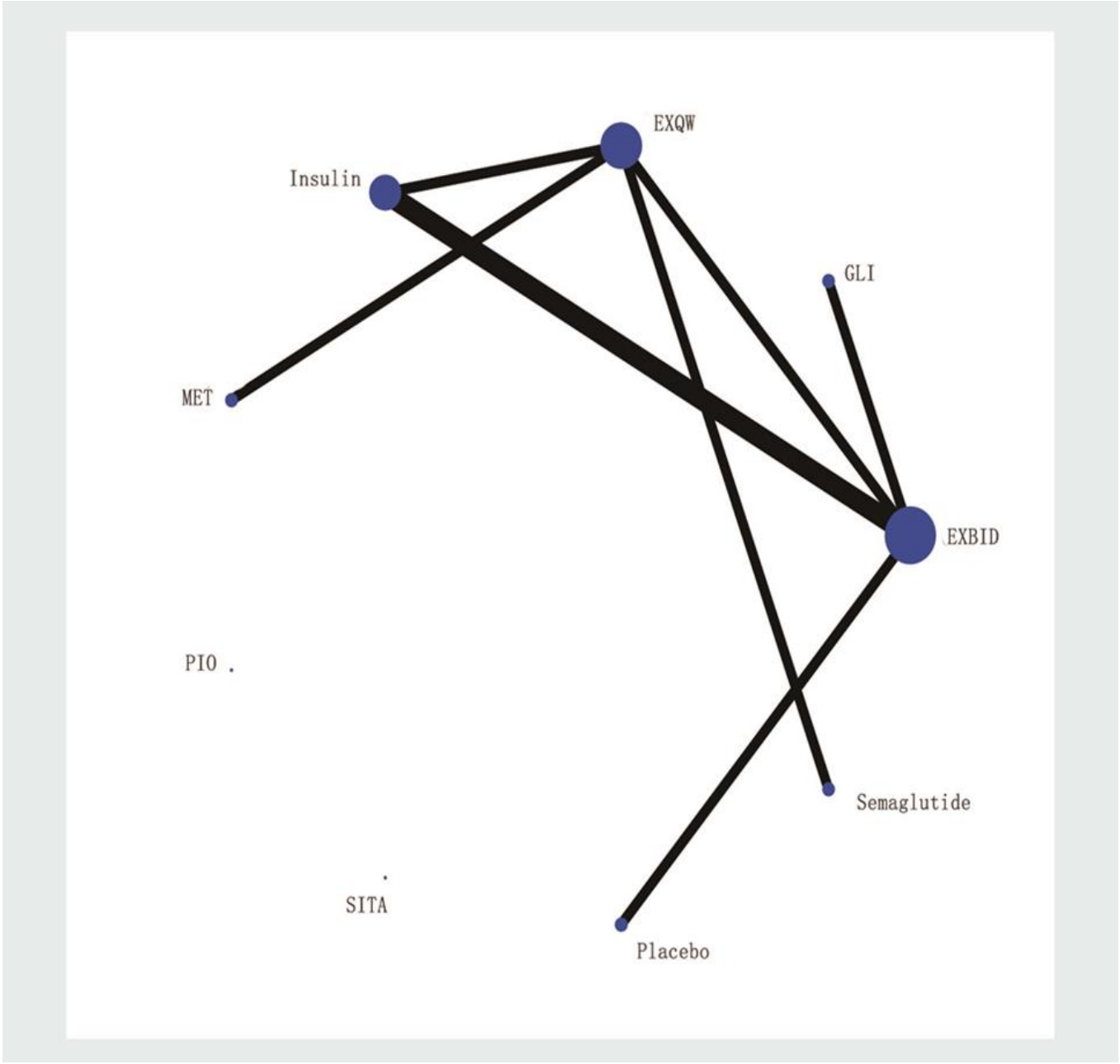


447 **B: HbA1c**

448

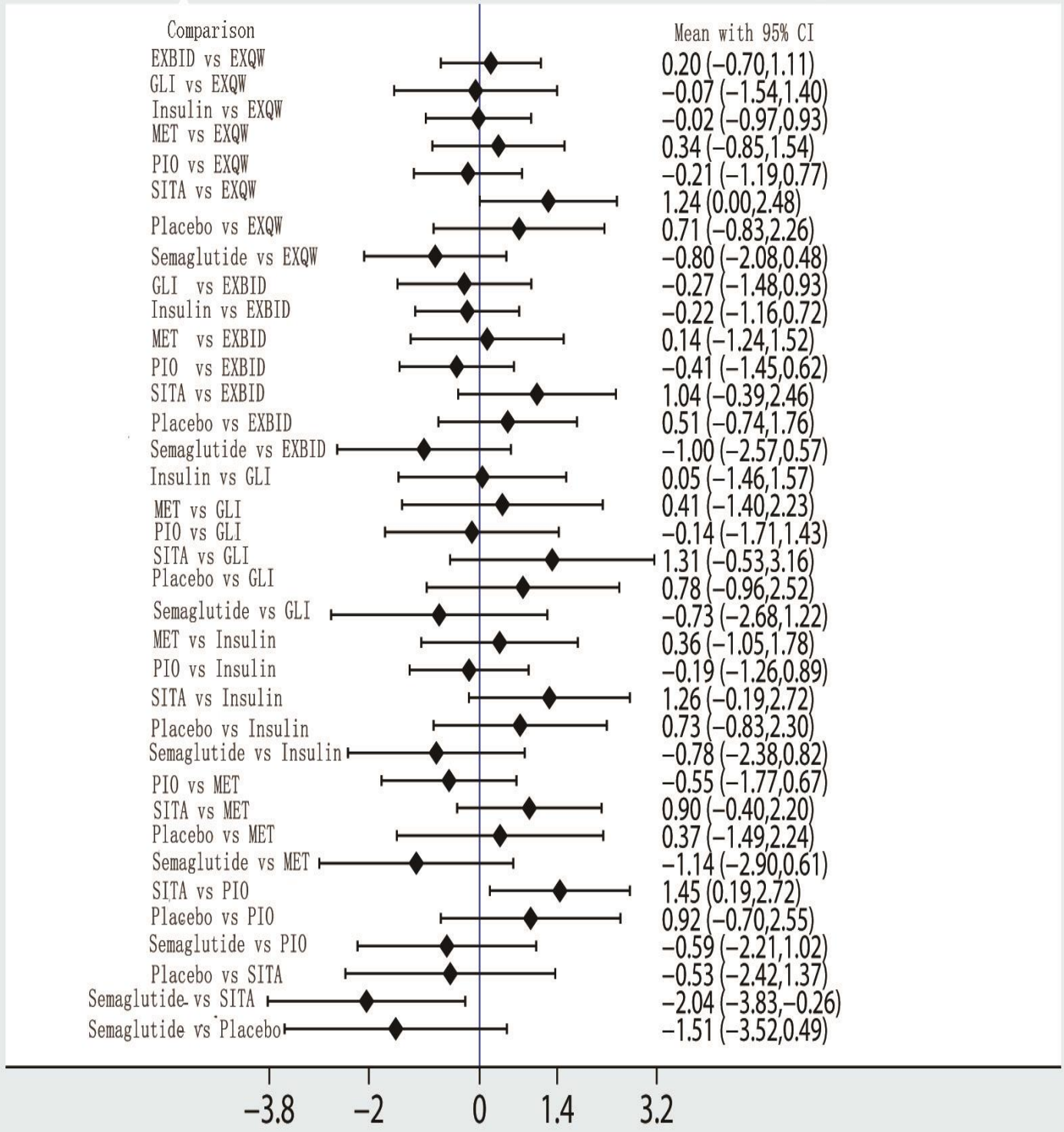
449

450

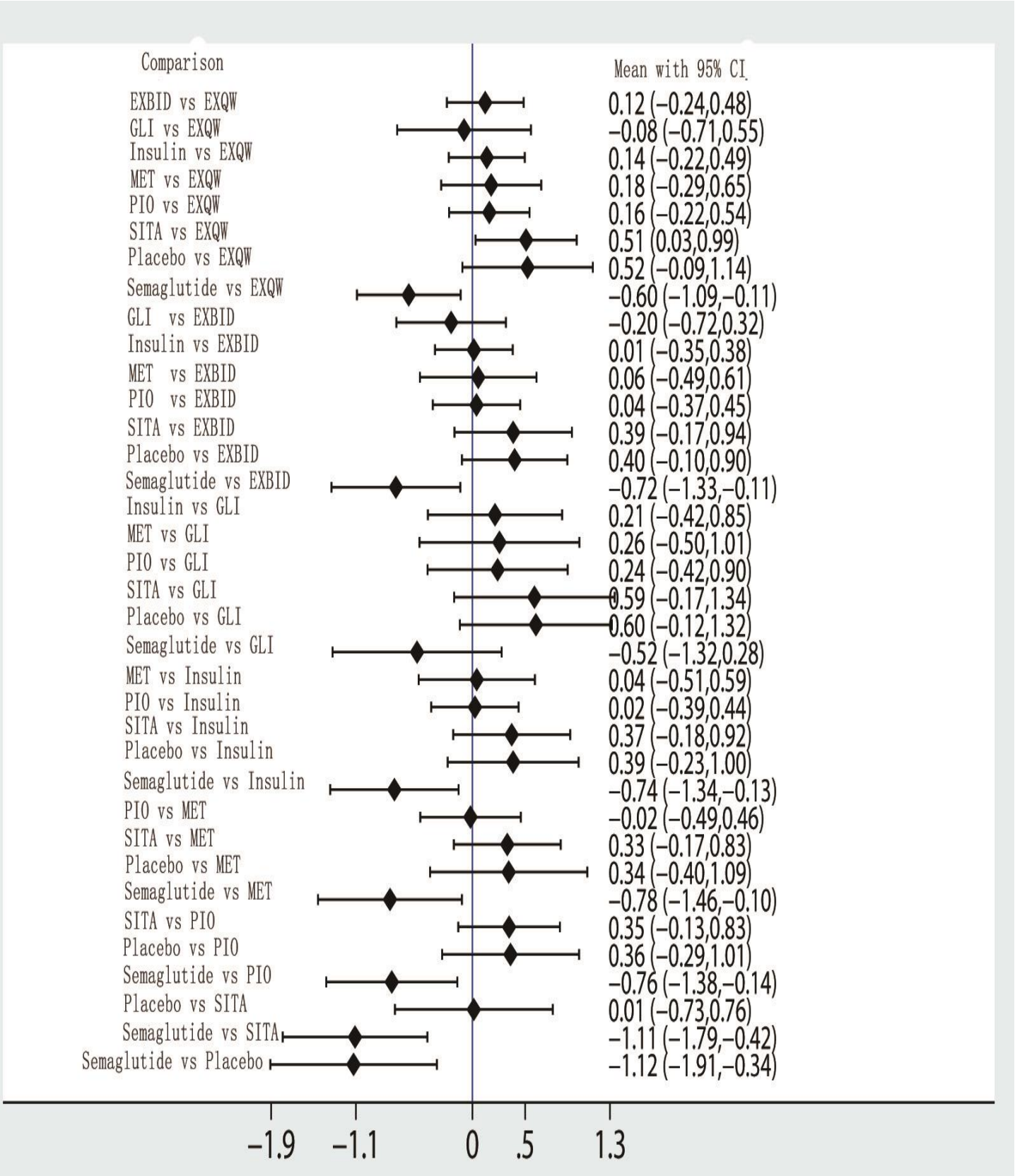


451 **C: Weight loss**

Figure S2: Results of network meta-analysis of the secondary outcomes (FBG, HbA1c, Weight loss).

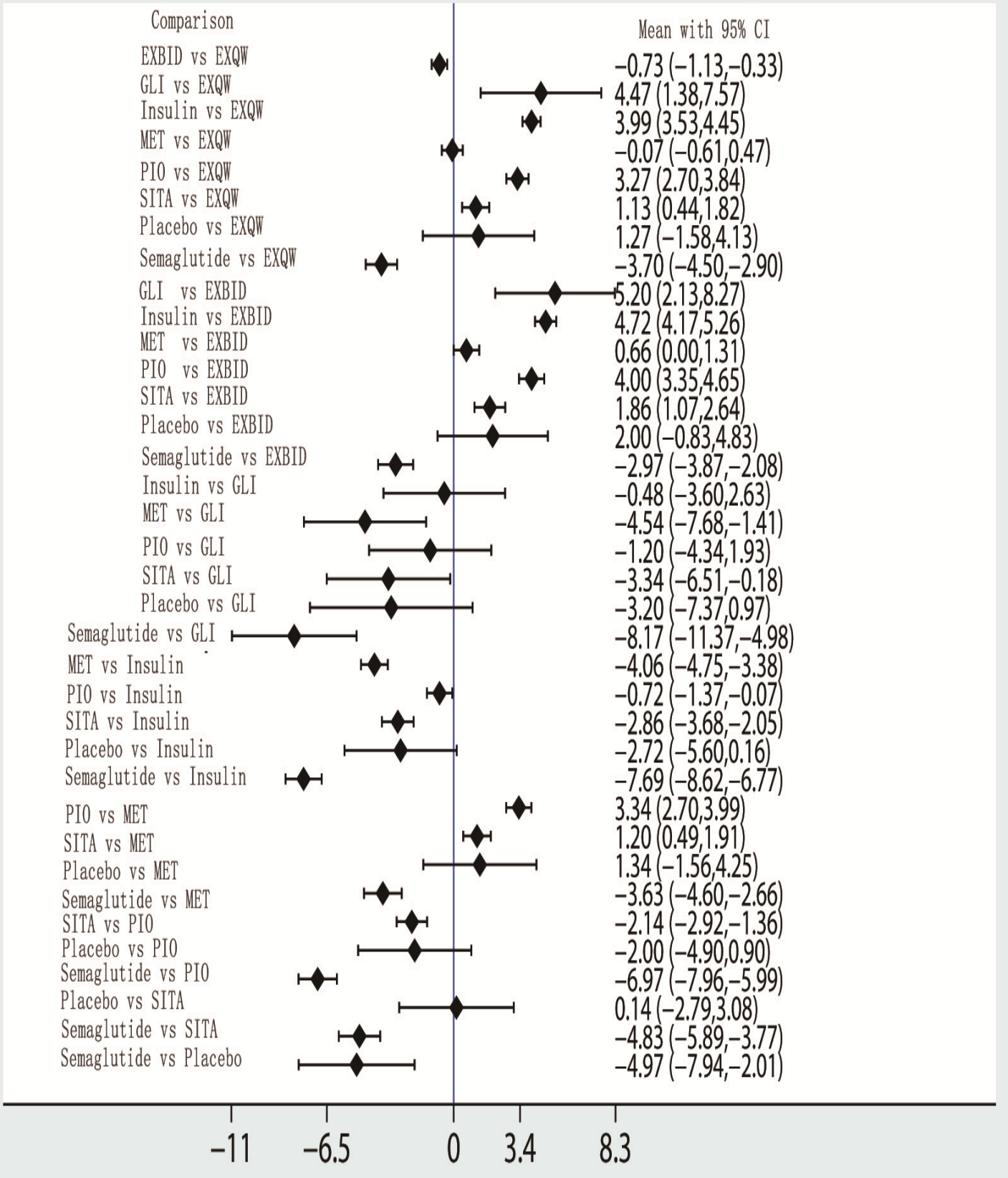


A: FBG



455 **B: HbA1c**

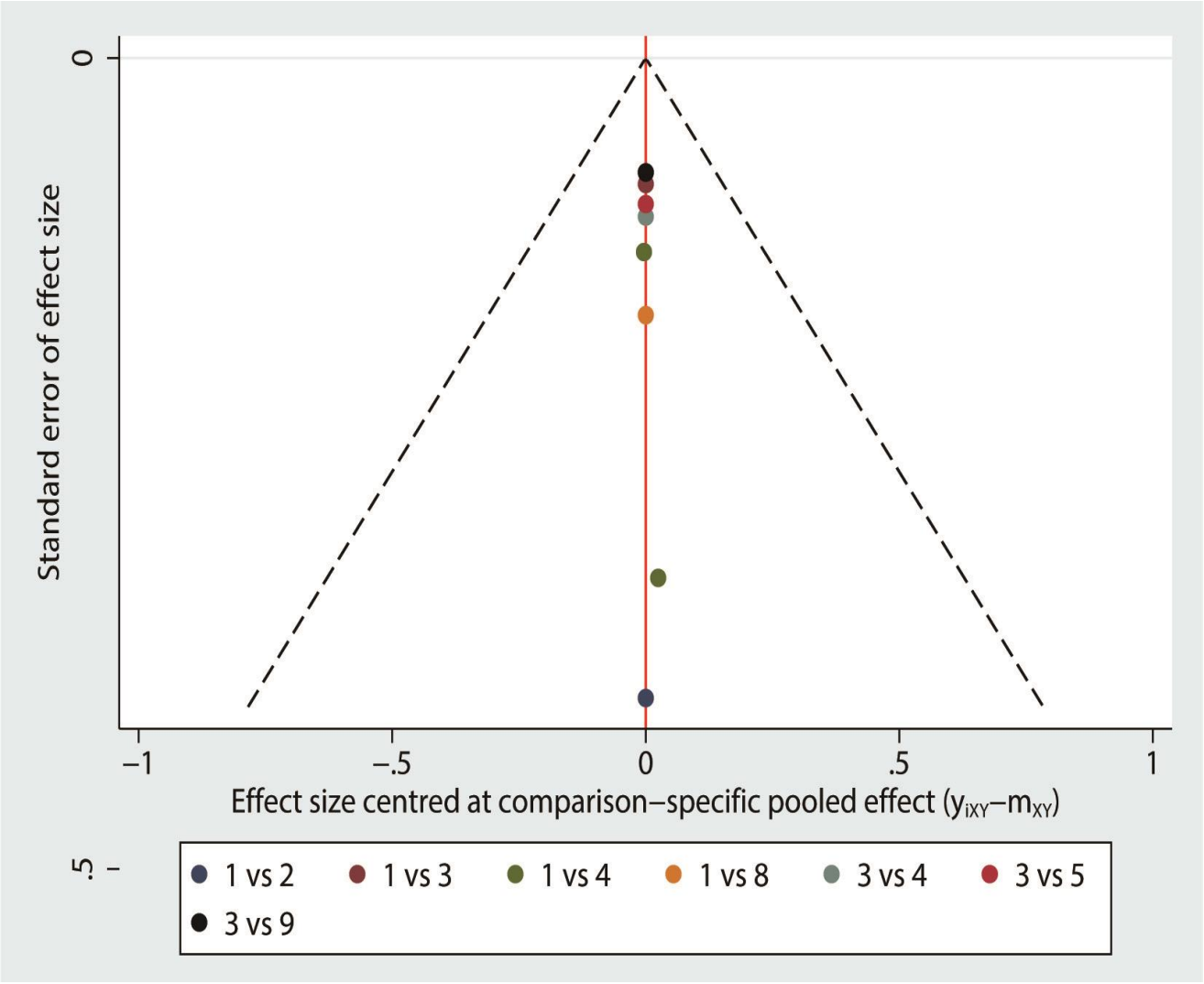
456



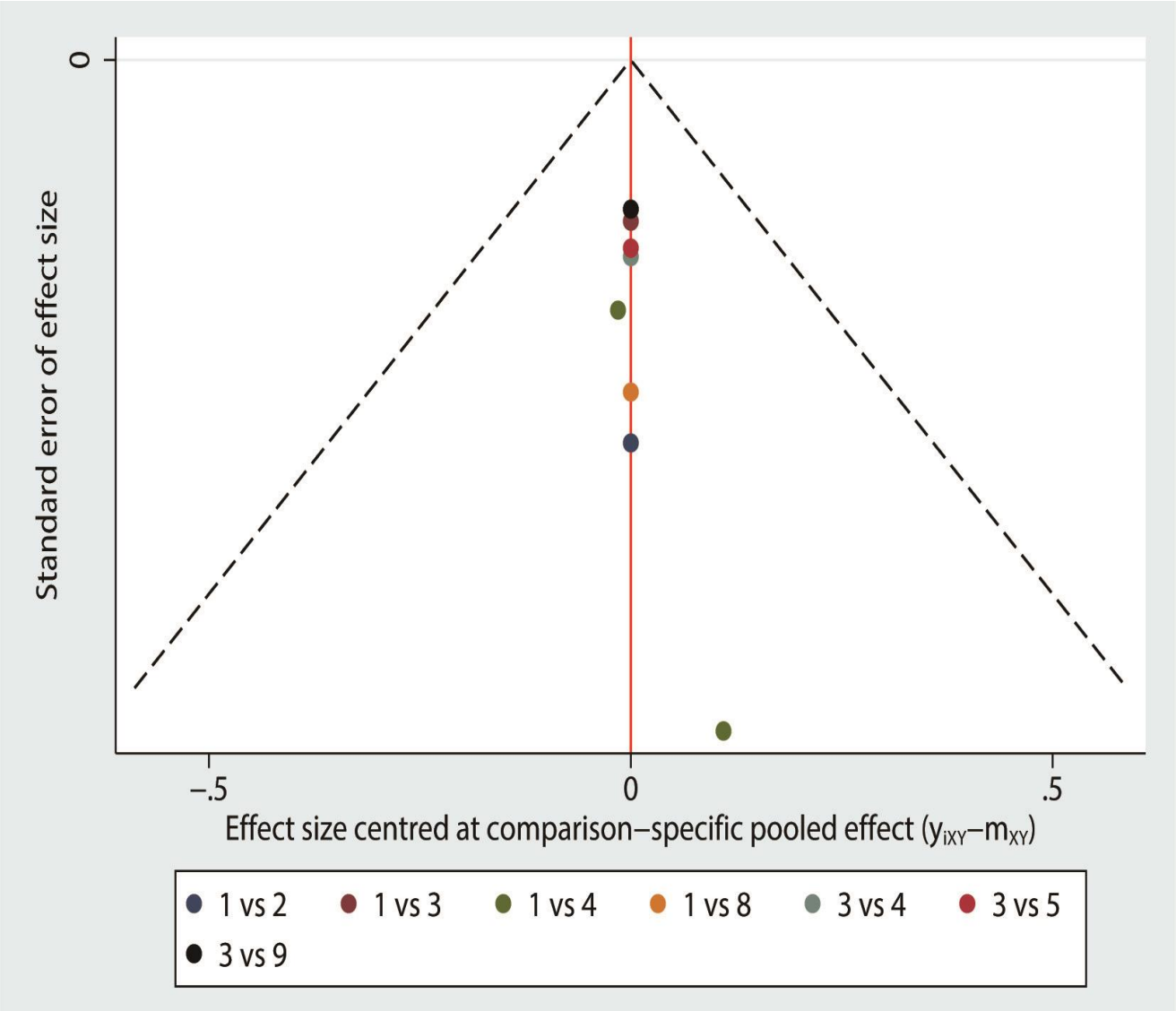
457 **C: Weight loss .**

458

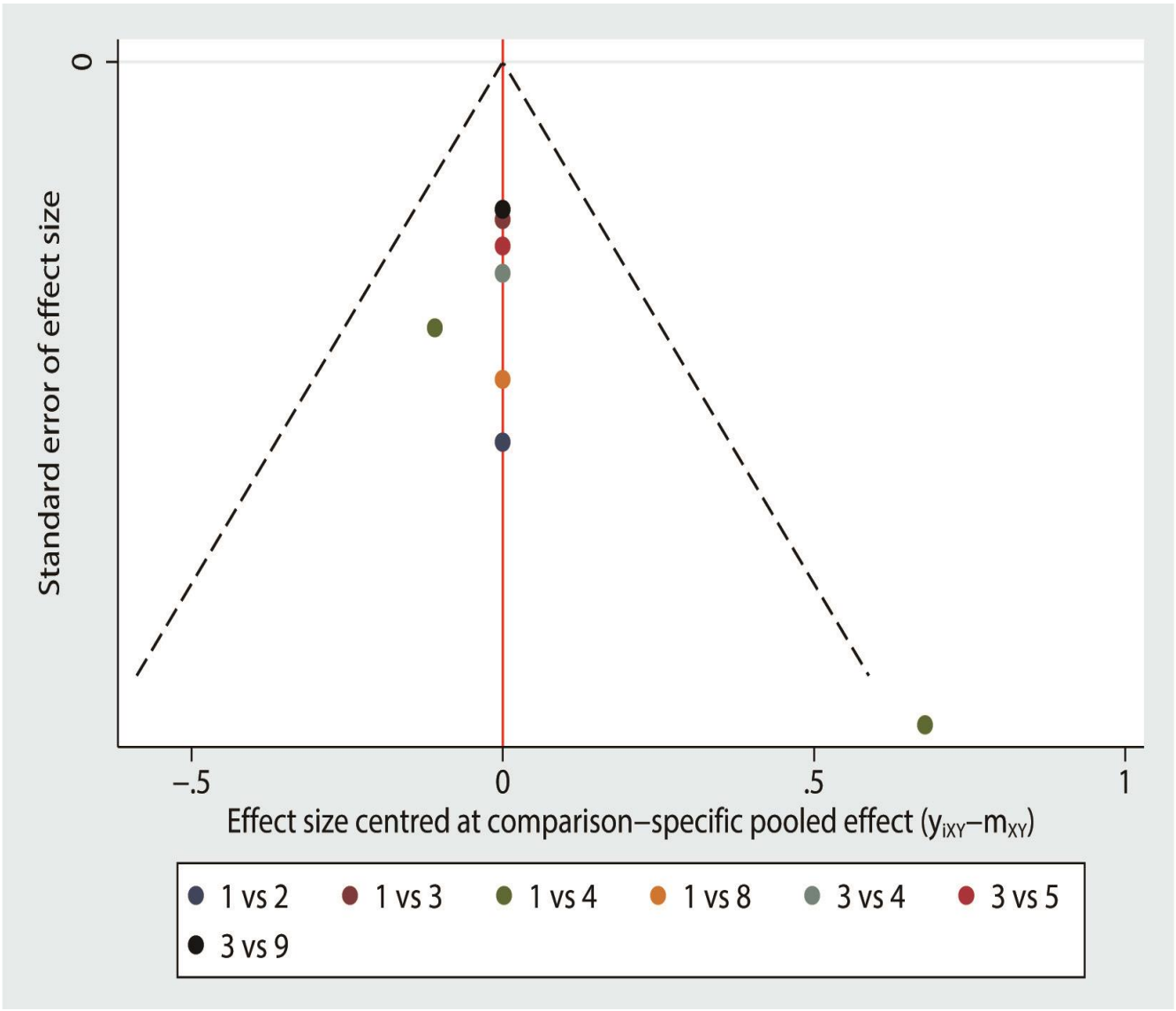
Figure S3: Comparison-adjusted funnel plots of the secondary outcomes (FBG, HbA1c, Weight loss)



A: FBG

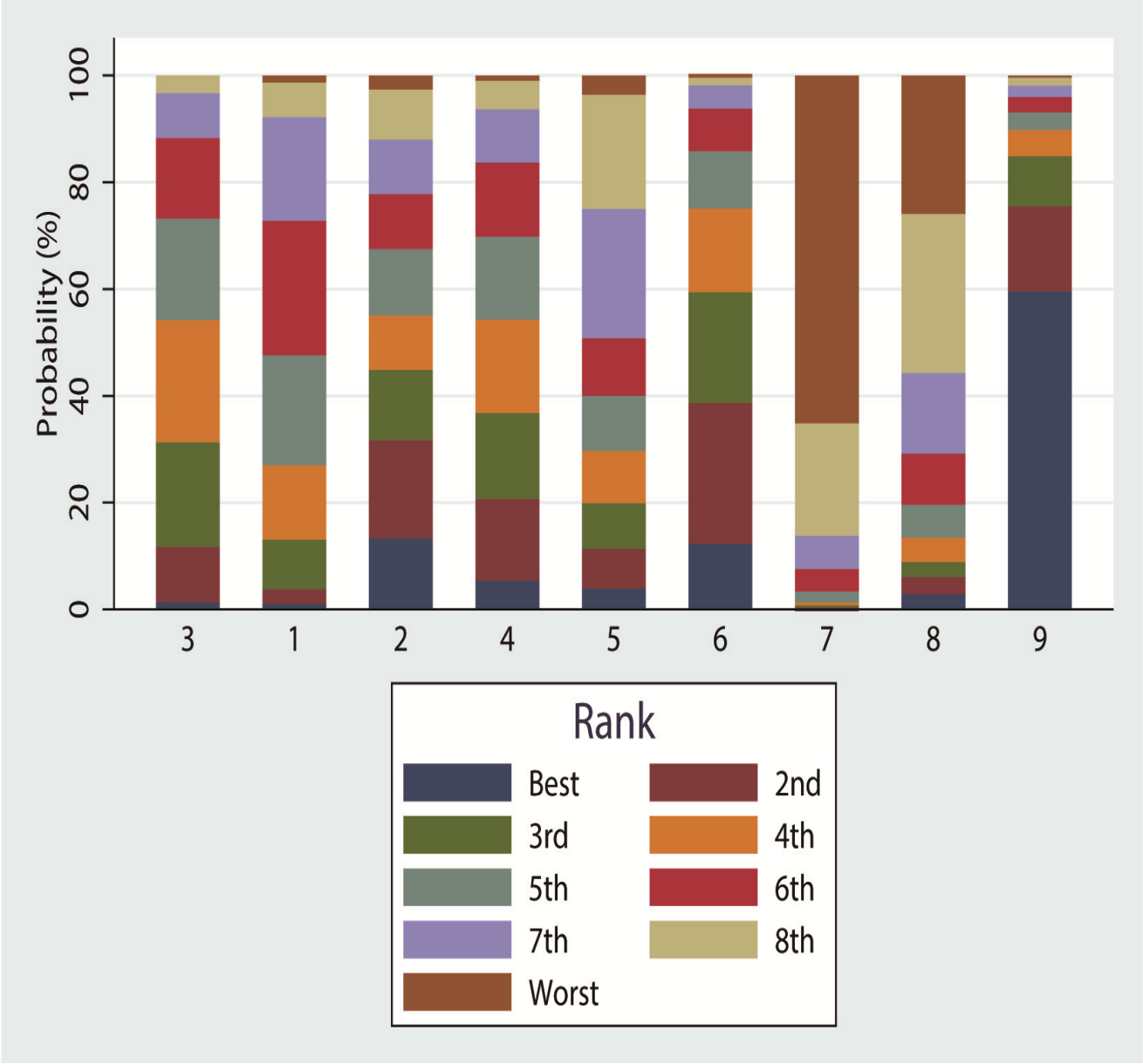

0
Standard error of effect size
−.5
0
.5
Effect size centred at comparison−specific pooled effect (y_{iXY}−m_{XY})
1 vs 2
1 vs 3
1 vs 4
1 vs 8
3 vs 4
3 vs 5
3 vs 9

B: HbA1c

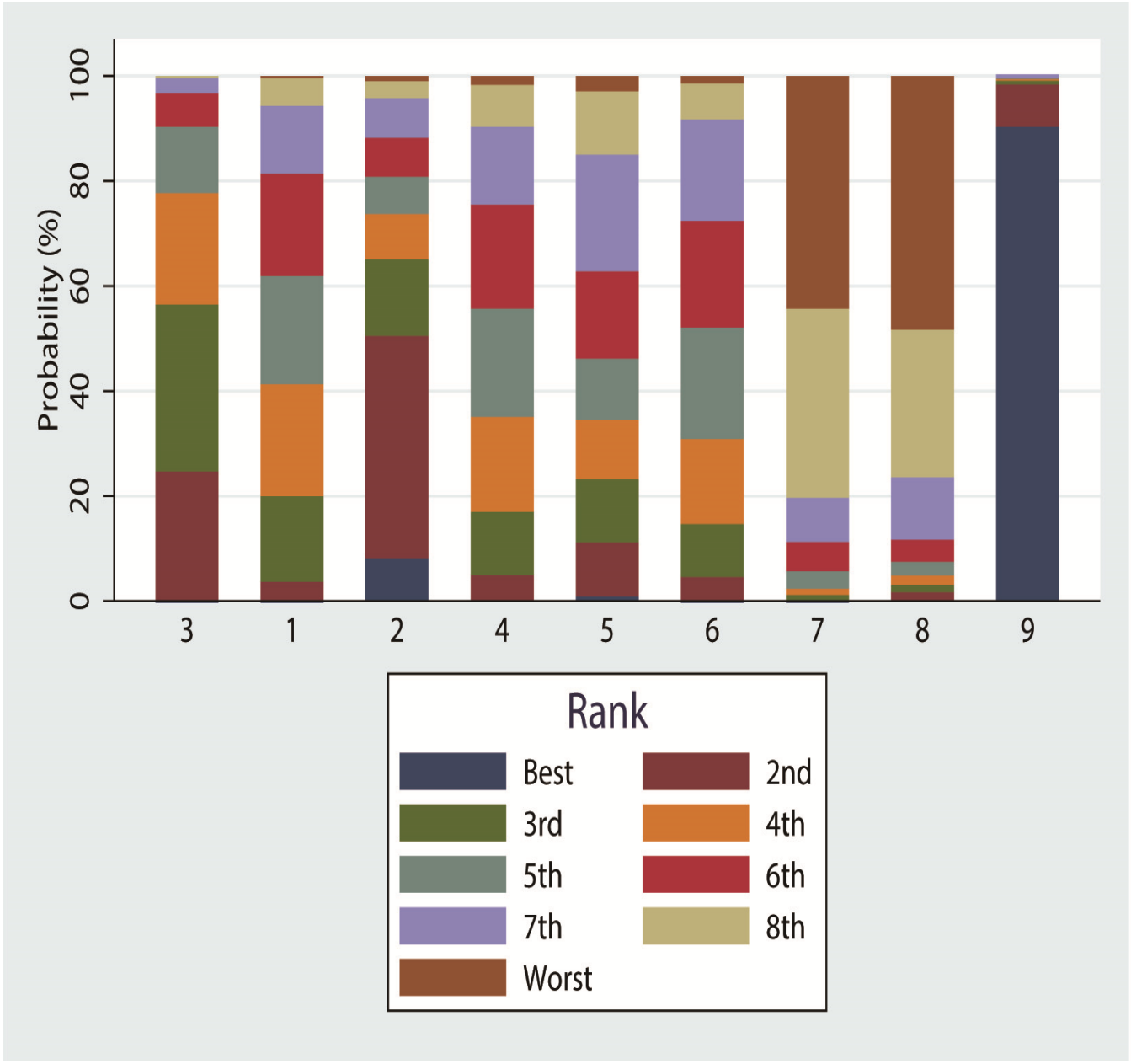


C: Weight loss

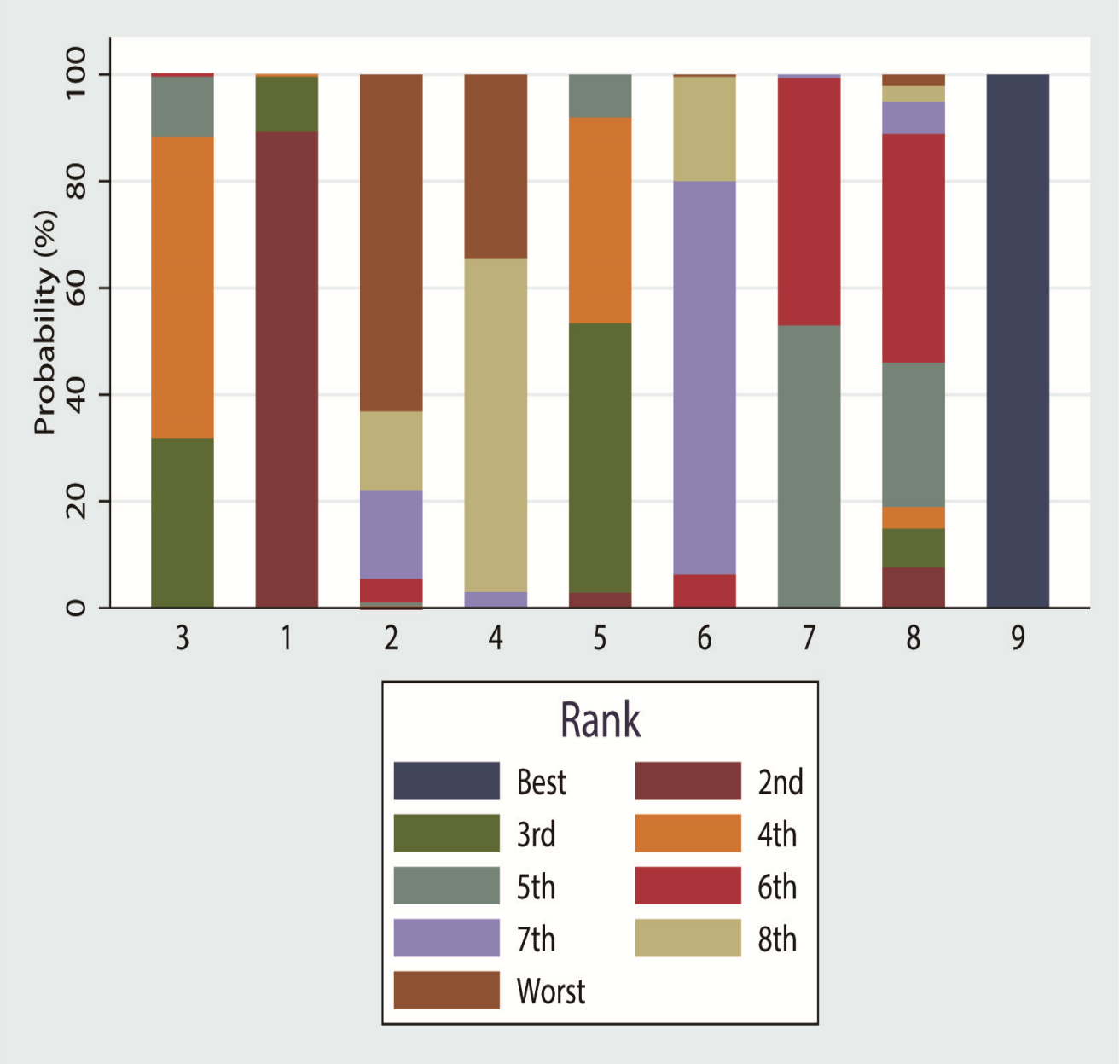
Figure S4: Plots of cumulative ranking probability of the secondary outcomes (FBG, HbA1c, Weight loss)



A: FBG

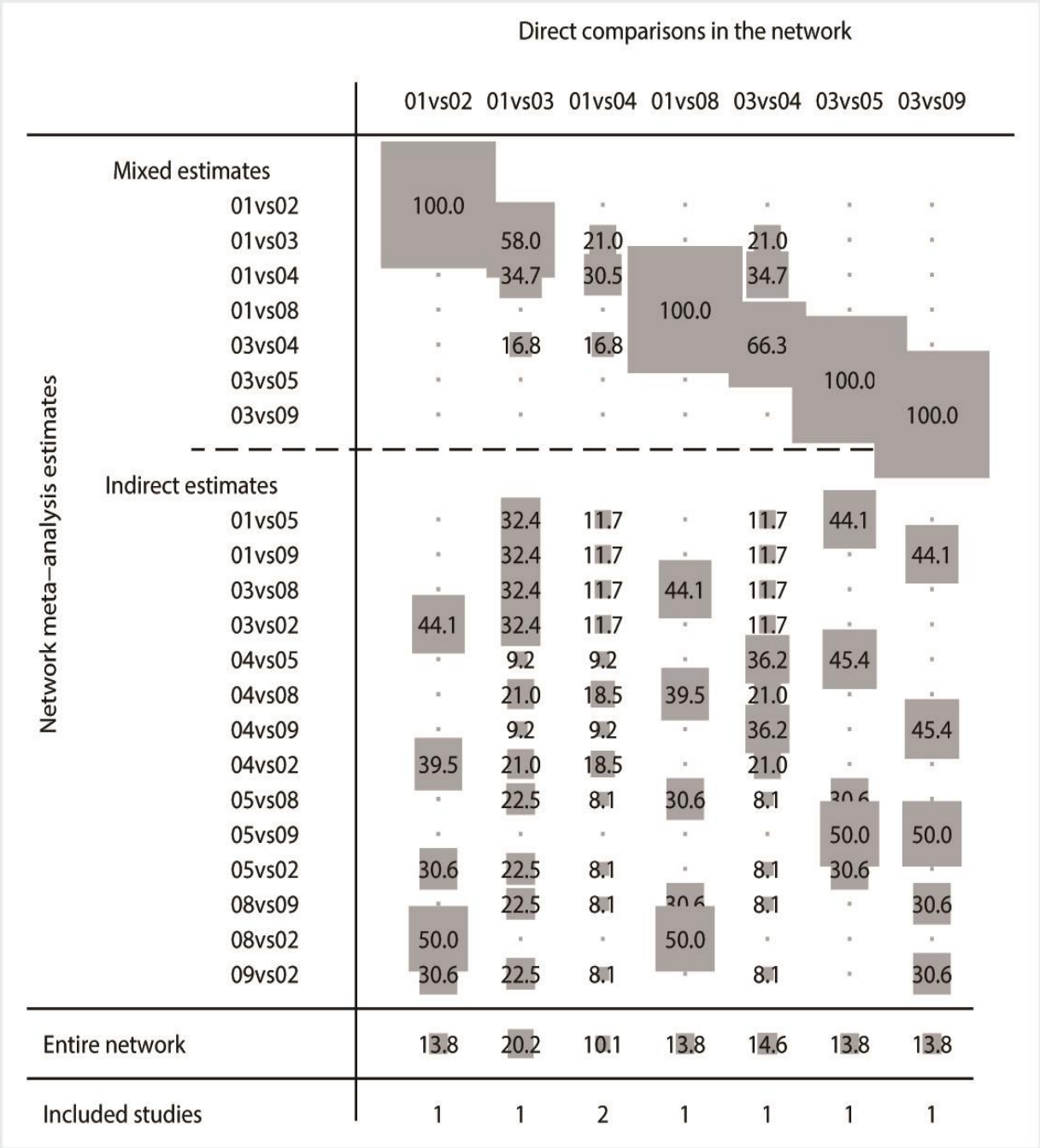

Probability (%)
0
20
40
60
80
100
3
1
2
4
5
6
7
8
9
Rank
Best
2nd
3rd
4th
5th
6th
7th
8th
Worst

B: HbA1c

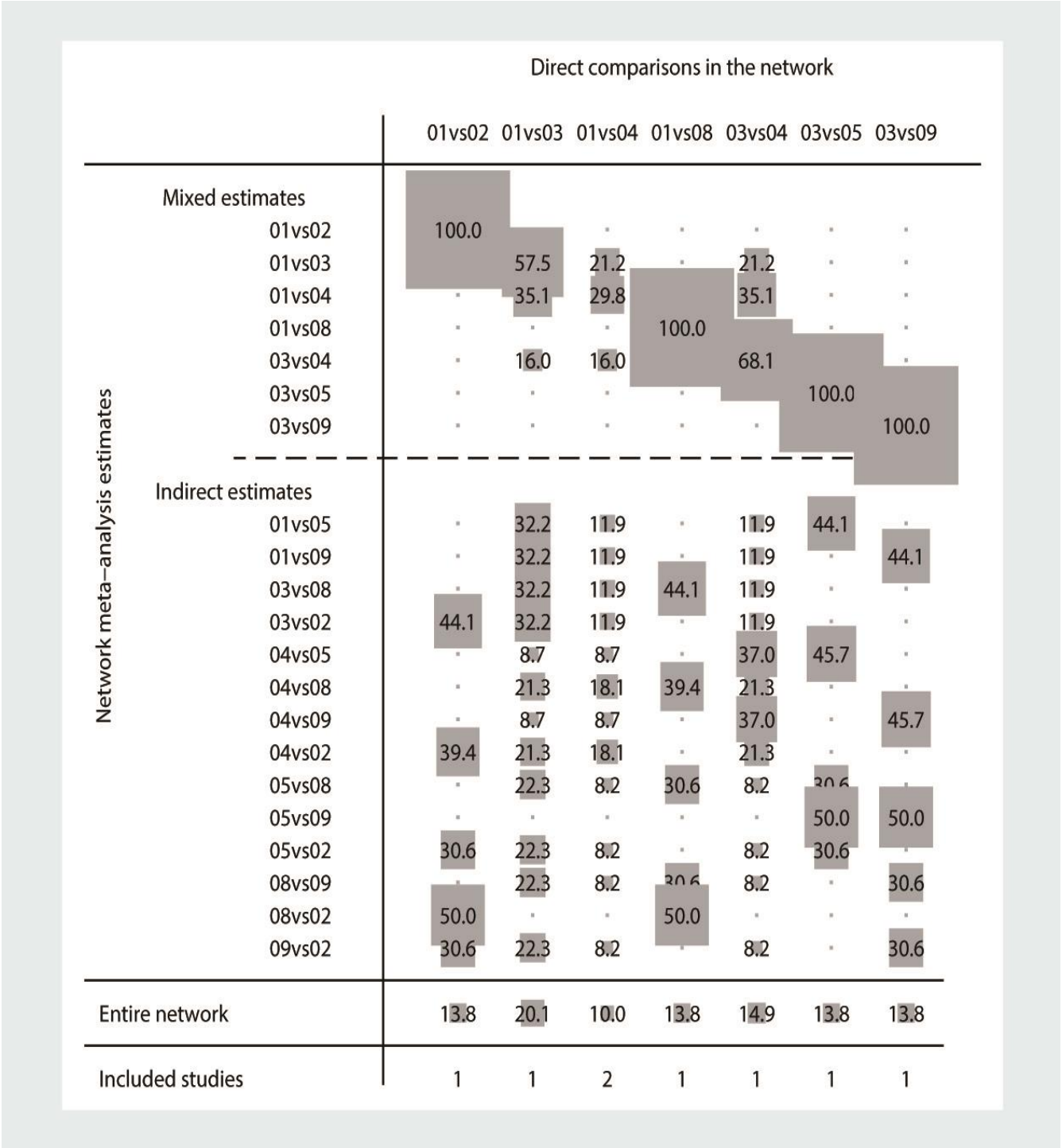


C: Weight loss

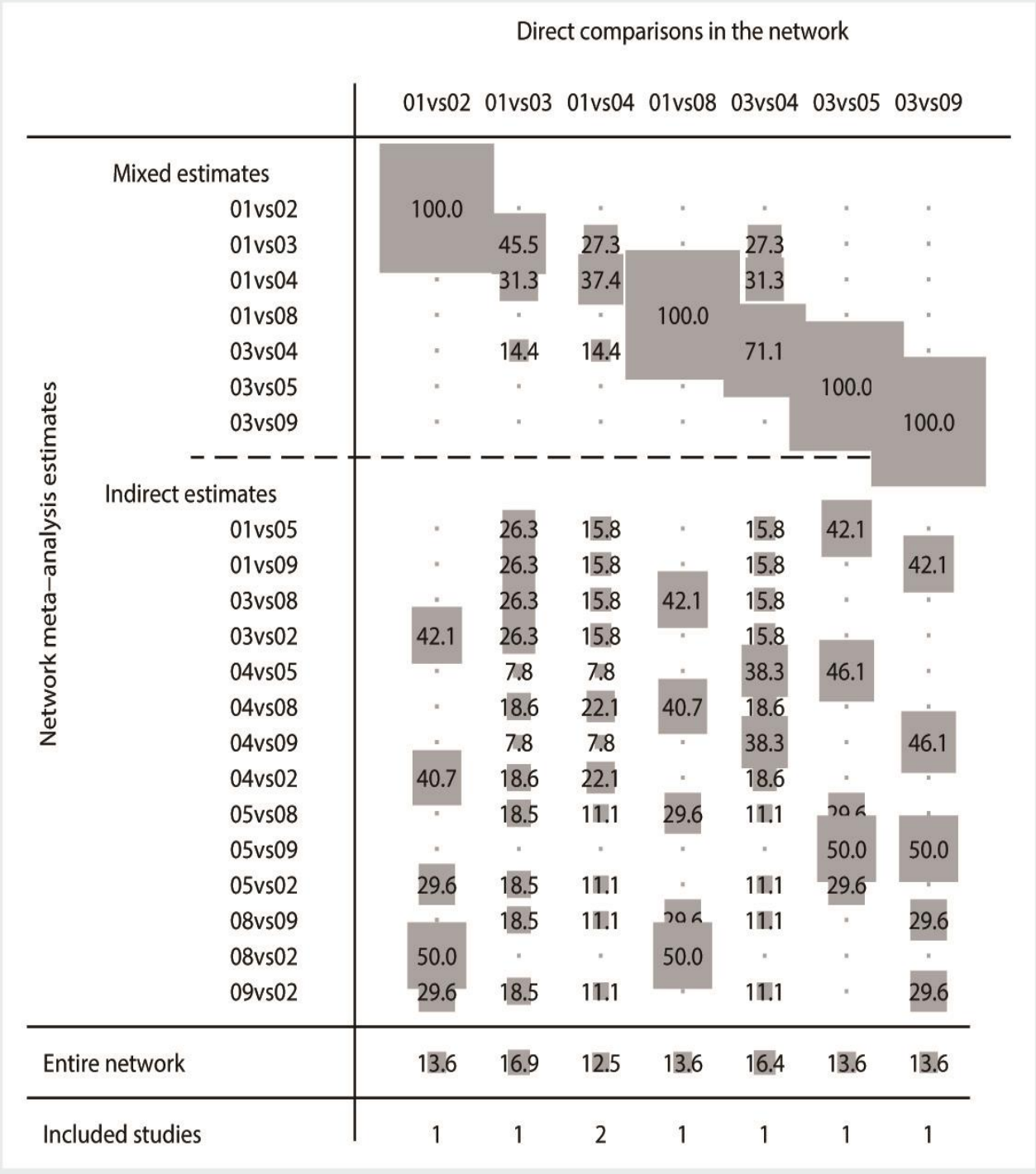
Figure S5: The contribution plots of included studies



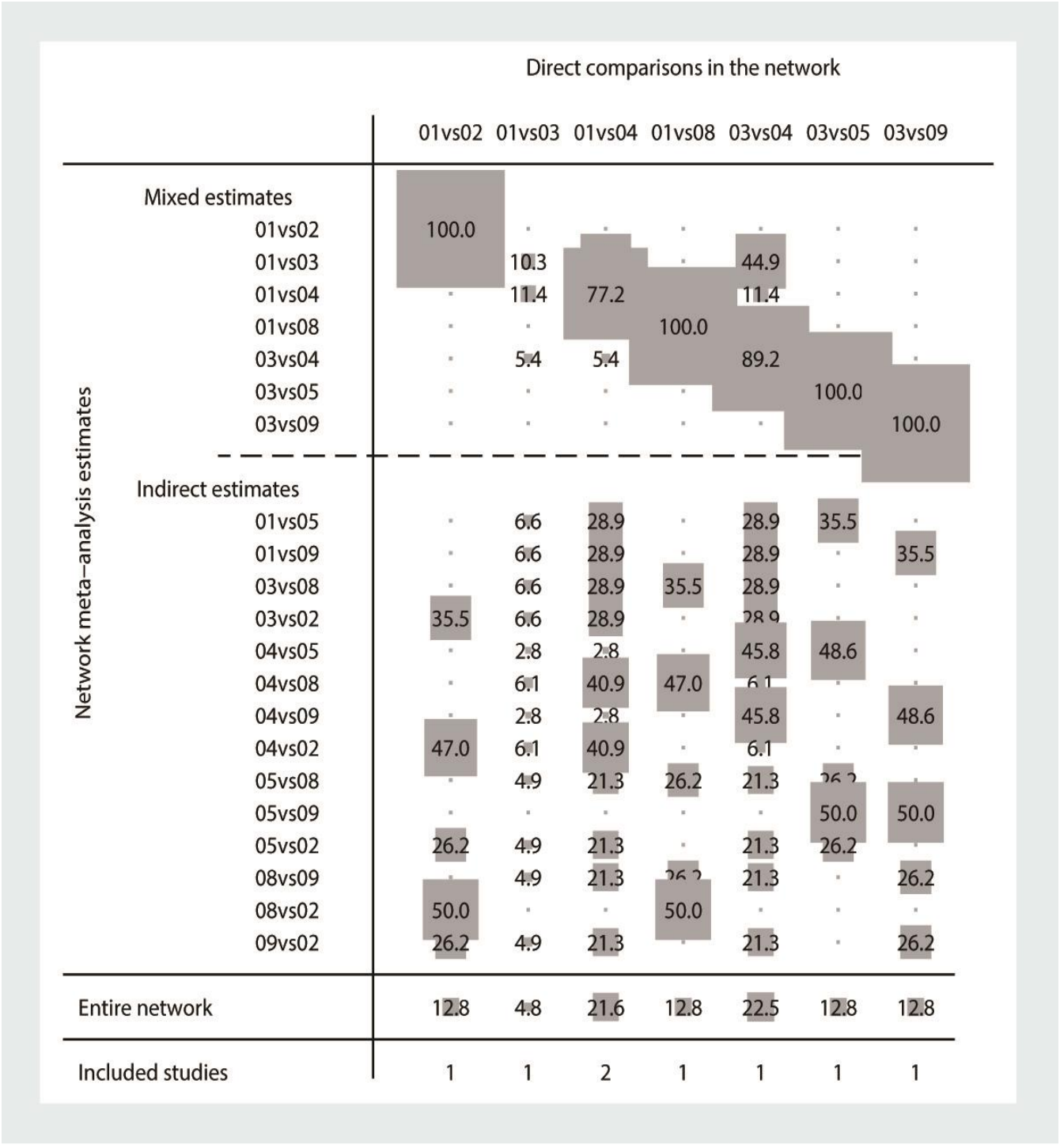
A: FBG


Direct comparisons in the network
01vs02 01vs03 01vs04 01vs08 03vs04 03vs05 03vs09
Mixed estimates
01vs02 100.0
01vs03 57.5 21.2 21.2
01vs04 35.1 29.8 35.1
01vs08 100.0
03vs04 16.0 16.0 68.1
03vs05 100.0
03vs09 100.0
Indirect estimates
01vs05 32.2 11.9 11.9 44.1
01vs09 32.2 11.9 11.9 44.1
03vs08 32.2 11.9 44.1 11.9
03vs02 44.1 32.2 11.9 11.9
04vs05 8.7 8.7 37.0 45.7
04vs08 21.3 18.1 39.4 21.3
04vs09 8.7 8.7 37.0 45.7
04vs02 39.4 21.3 18.1 21.3
05vs08 22.3 8.2 30.6 8.2
05vs09 50.0 50.0
05vs02 30.6 22.3 8.2 8.2 30.6
08vs09 22.3 8.2 8.2 30.6
08vs02 50.0 50.0
09vs02 30.6 22.3 8.2 8.2 30.6
Network meta−analysis estimates
Entire network 13.8 20.1 10.0 13.8 14.9 13.8 13.8
Included studies 1 1 2 1 1 1 1

B: HbA1c


Direct comparisons in the network
01vs02 01vs03 01vs04 01vs08 03vs04 03vs05 03vs09
Network meta−analysis estimates
Mixed estimates
01vs02 100.0
01vs03 45.5 27.3 27.3
01vs04 31.3 37.4 31.3
01vs08 100.0
03vs04 14.4 14.4 71.1
03vs05 100.0
03vs09 100.0
Indirect estimates
01vs05 26.3 15.8 15.8 42.1
01vs09 26.3 15.8 15.8 42.1
03vs08 26.3 15.8 42.1 15.8
03vs02 42.1 26.3 15.8 15.8
04vs05 7.8 7.8 38.3 46.1
04vs08 18.6 22.1 40.7 18.6
04vs09 7.8 7.8 38.3 46.1
04vs02 40.7 18.6 22.1 18.6
05vs08 18.5 11.1 29.6 11.1
05vs09 50.0 50.0
05vs02 29.6 18.5 11.1 11.1 29.6
08vs09 18.5 11.1 11.1 29.6
08vs02 50.0 50.0
09vs02 29.6 18.5 11.1 11.1 29.6
Entire network 13.6 16.9 12.5 13.6 16.4 13.6 13.6
Included studies 1 1 2 1 1 1 1

C: HOMA-β



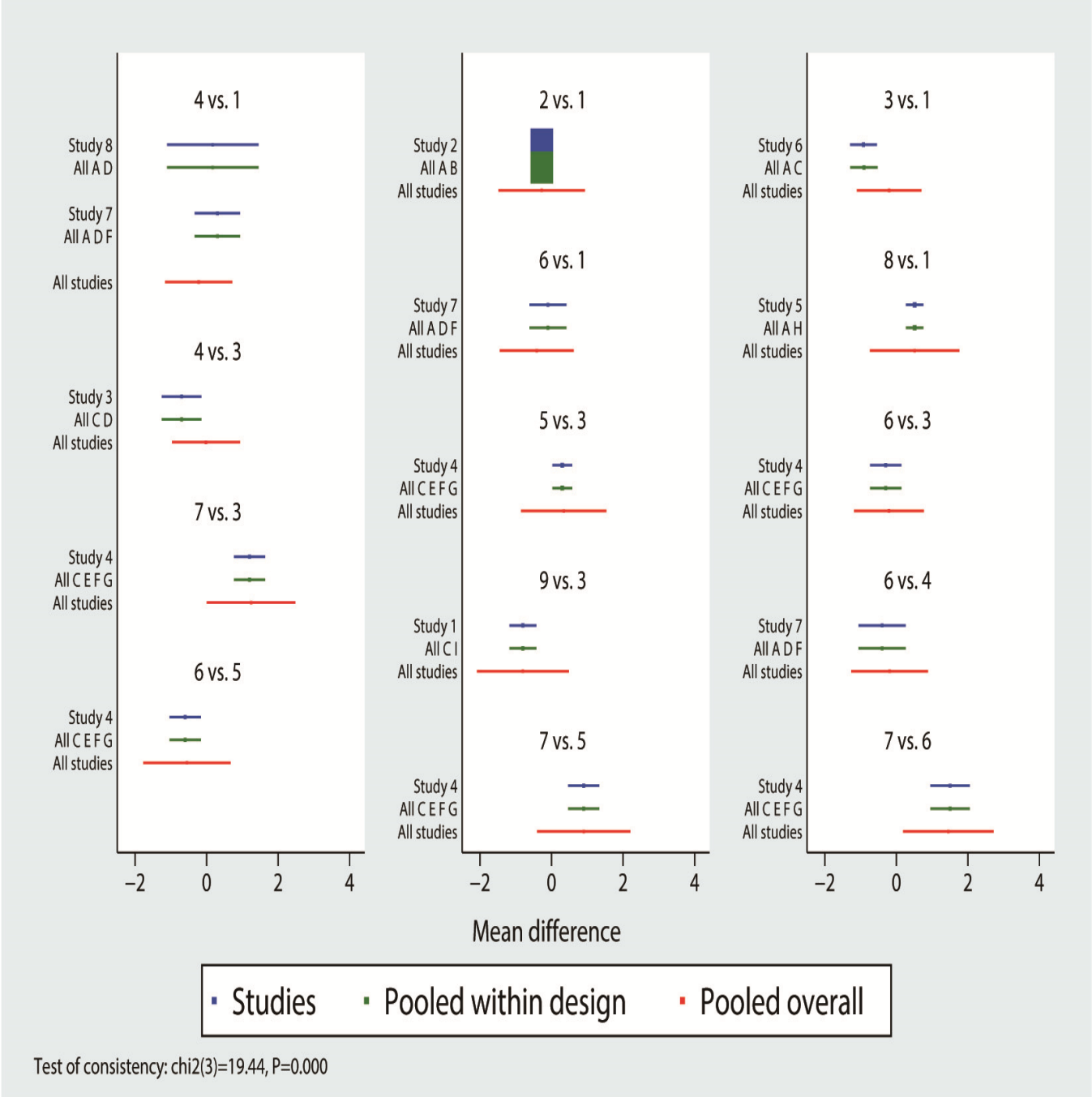
521 **D: Weight loss**

522 1: EXBID; 2: GLI; 3: EXQW; 4: Insulin; 5: MET; 6: PIO; 7: SITA; 8: Placebo; 9: Semaglutide

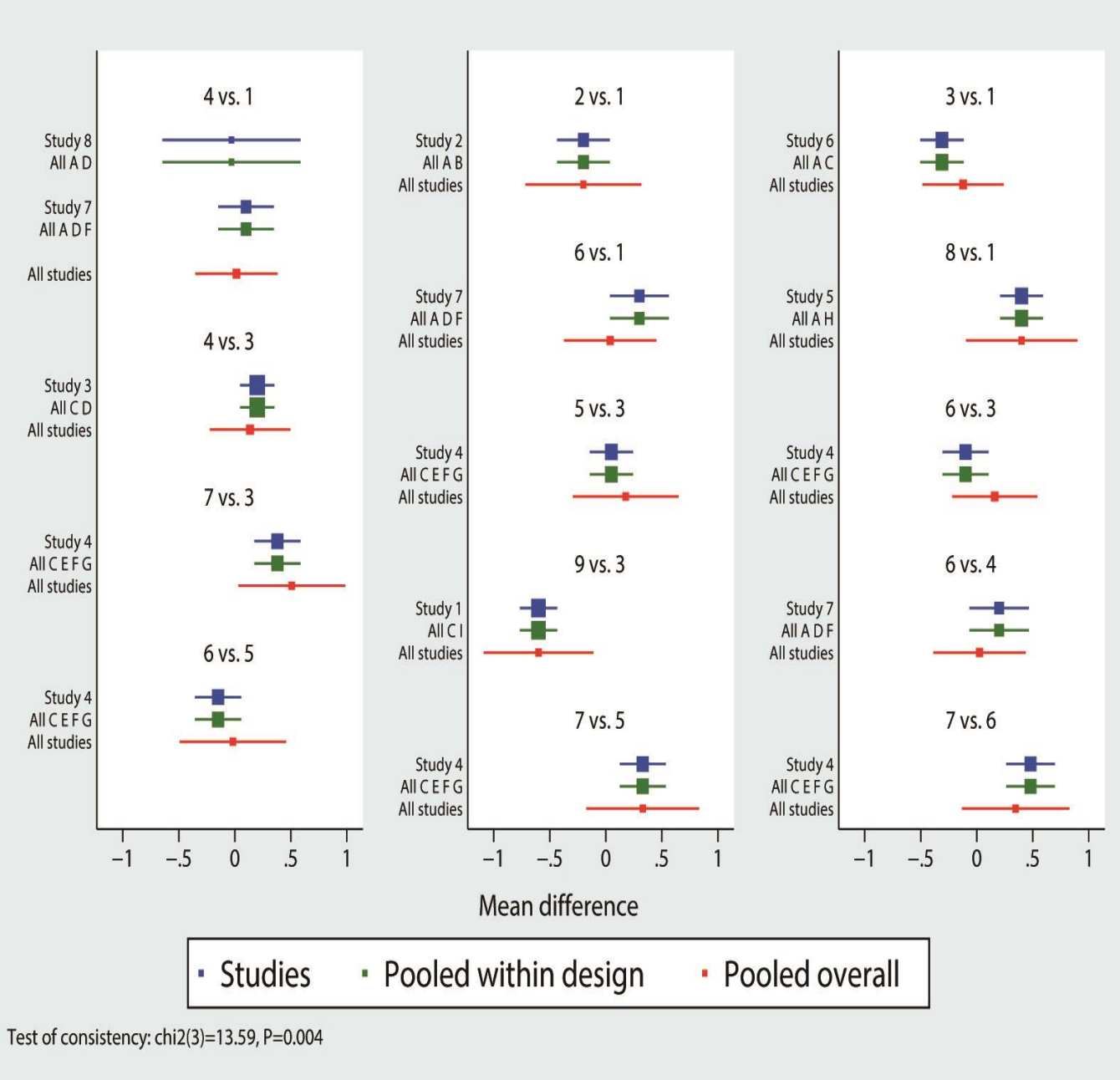
523

524

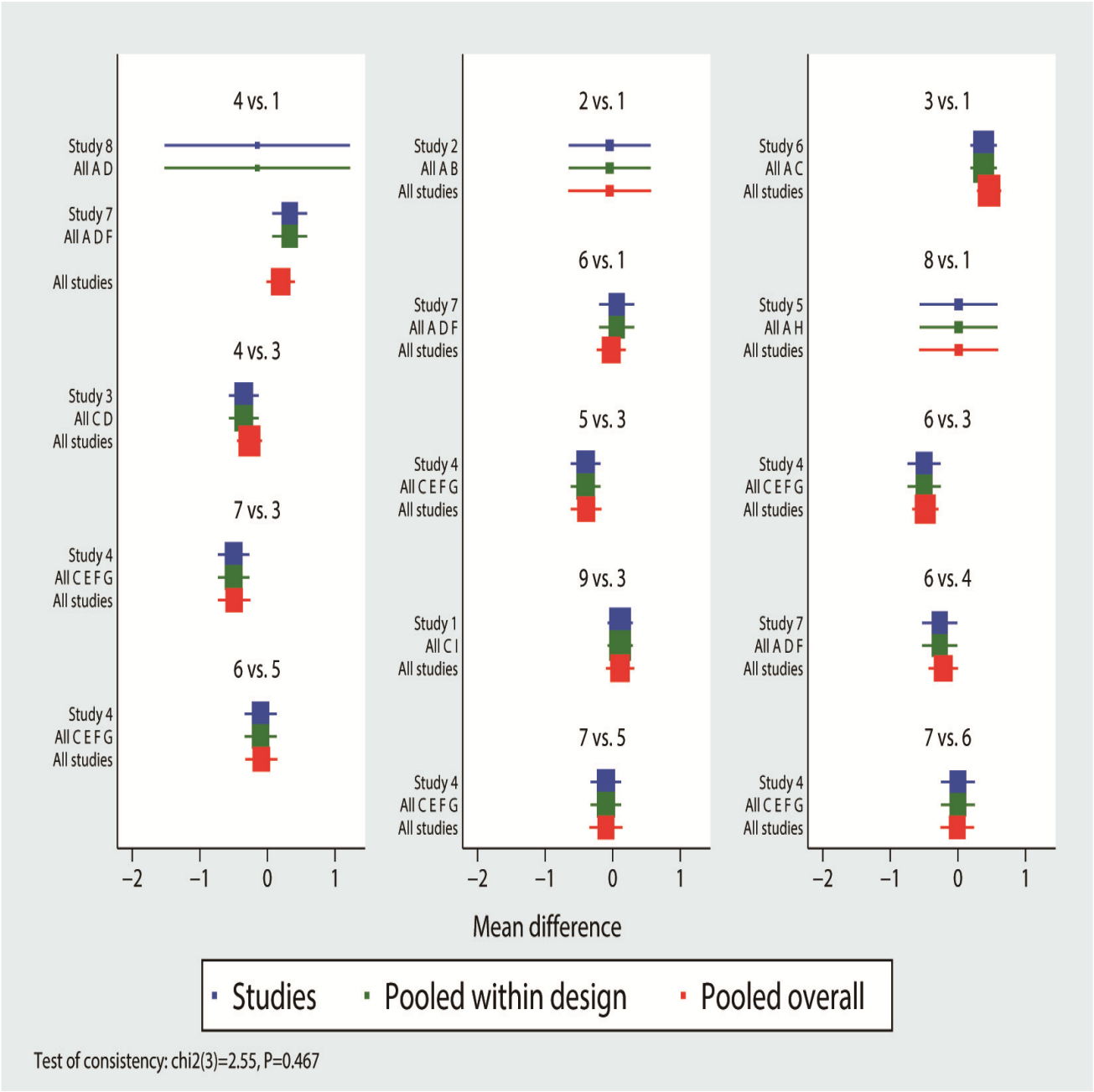
Figure S6: Node-splitting plots of outcomes



A: FBG

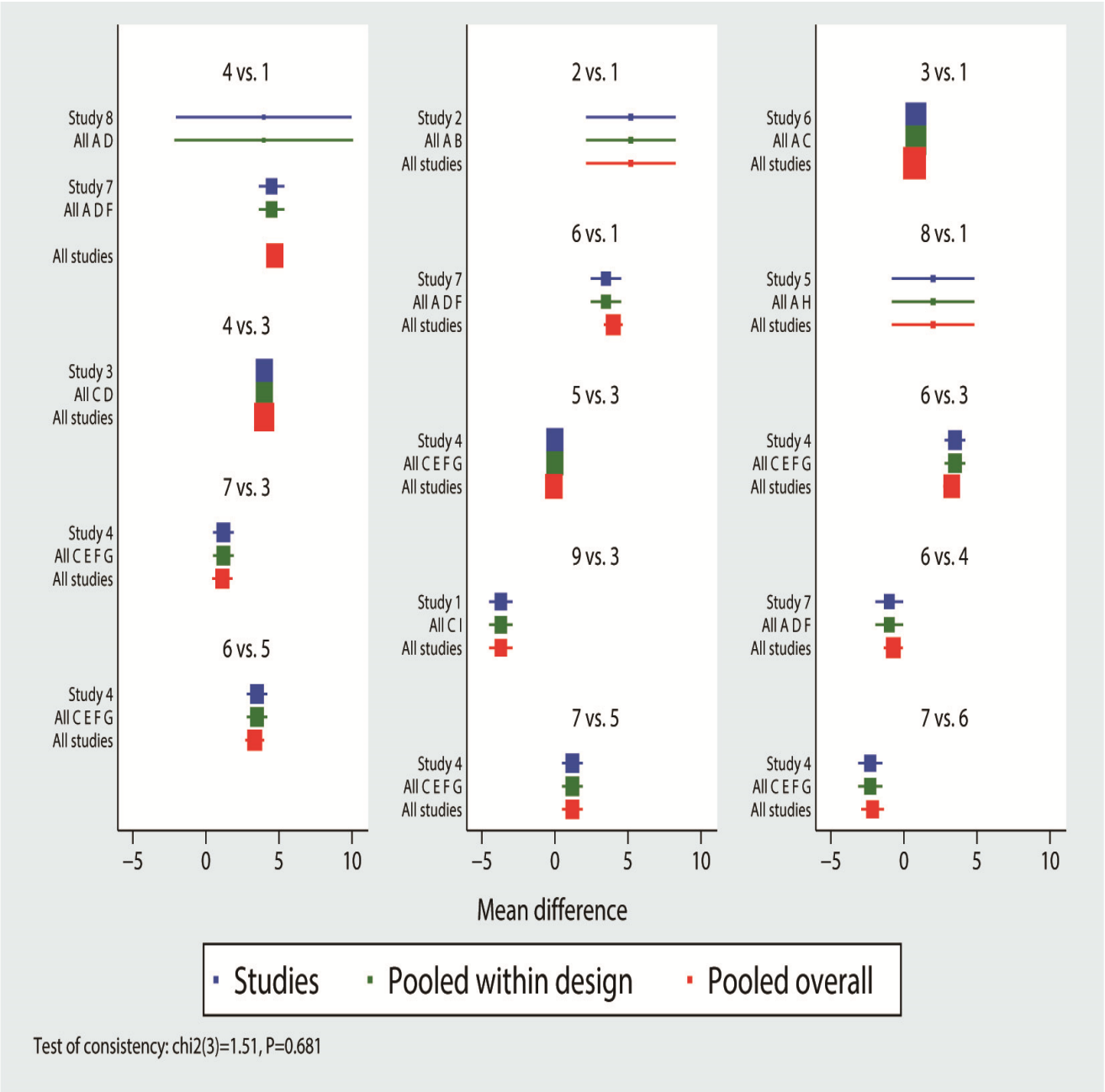

4 vs. 1
Study 8
All A D
Study 7
All A D F
All studies
4 vs. 3
Study 3
All C D
All studies
7 vs. 3
Study 4
All C E F G
All studies
6 vs. 5
Study 4
All C E F G
All studies
2 vs. 1
Study 2
All A B
All studies
6 vs. 1
Study 7
All A D F
All studies
5 vs. 3
Study 4
All C E F G
All studies
9 vs. 3
Study 1
All C I
All studies
7 vs. 5
Study 4
All C E F G
All studies
3 vs. 1
Study 6
All A C
All studies
8 vs. 1
Study 5
All A H
All studies
6 vs. 3
Study 4
All C E F G
All studies
6 vs. 4
Study 7
All A D F
All studies
7 vs. 6
Study 4
All C E F G
All studies
−1
−.5
0
.5
1
Mean difference
Studies
Pooled within design
Pooled overall
Test of consistency: chi2(3)=13.59, P=0.004

B: HbA1c


4 vs. 1
Study 8
All A D
Study 7
All A D F
All studies
4 vs. 3
Study 3
All C D
All studies
7 vs. 3
Study 4
All C E F G
All studies
6 vs. 5
Study 4
All C E F G
All studies
2 vs. 1
Study 2
All A B
All studies
6 vs. 1
Study 7
All A D F
All studies
5 vs. 3
Study 4
All C E F G
All studies
9 vs. 3
Study 1
All C I
All studies
7 vs. 5
Study 4
All C E F G
All studies
3 vs. 1
Study 6
All A C
All studies
8 vs. 1
Study 5
All A H
All studies
6 vs. 3
Study 4
All C E F G
All studies
6 vs. 4
Study 7
All A D F
All studies
7 vs. 6
Study 4
All C E F G
All studies
−2
−1
0
1
Mean difference
Studies
Pooled within design
Pooled overall
Test of consistency: chi2(3)=2.55, P=0.467

C: HOMA-β

539



540 **D: Weight loss**

541 1: EXBID; 2: GLI; 3: EXQW; 4: Insulin; 5: MET; 6: PIO; 7: SITA; 8: Placebo; 9: Semaglutide